

WHAT IS CLAIMED IS

1. A connector for mounting on a circuit board, the connector including an insulative frame and two laterally-spaced columns of contacts mounted on said insulative frame, the contacts in each column being spaced apart along a longitudinal direction by a predetermined spacing, each contact comprising a metal strip that has a centerline and that forms an upper contact portion lying in a vertical plane and that forms a lower contact portion lying below said upper contact portion, said lower contact portion having a termination end for engaging a conductive trace on the circuit board, said contacts being arranged in pairs with one contact of each pair lying in a different one of said columns and with the upper contact portions of a pair of contacts being laterally spaced apart in a lateral direction that is perpendicular to said longitudinal direction and lying in the same vertical plane, wherein:

the lower contact portion of each of said contacts has a deflectable strip section with a centerline that lies in a vertical plane that is angled a plurality of degrees from the vertical plane of the upper contact portion of the same contact, to position the termination end of the contact so it is longitudinally spaced from the vertical plane of the contact by half of said predetermined spacing, and the termination ends of said contacts in said two columns all lie approximately in a single longitudinally-extending row.

2. The connector described in claim 1 including said circuit board, and wherein:

said circuit board has an upper face with a single column of termination-engaging traces, the spacing of said termination-engaging traces along said single column being half said predetermined spacing of said contacts along

each of said columns of contacts.

3. The connector described in claim 1 wherein:

each of said upper contact portions has a laterally extending upper branch with an upwardly projecting contracting location, a laterally extending middle branch lying directly under said upper branch, and a first bend of about 180° joining said upper and middle branches;

each of said contacts includes a second bend that connects the lower contact portion to an end of said middle branch that is opposite said first bend, each second bend forming a bend of about 180° about an axis that is angled a plurality of degrees but no more than 45° from said longitudinal direction.

4. The connector described in claim 1 wherein:

said contacts of said two columns of contacts are all the same, but the contacts of one of said columns is oriented by being turned 180° about a vertical axis from the orientations of the contacts of the other column of contacts.

5. The connector described in claim 1 wherein:

said contacts are horizontally spaced along each of said columns;

said contact lower portions each have a vertically-extending termination section connecting an end of an elongated deflectable strip section to a termination end.

6. A combination of a circuit board having conductive traces and a connector mounted on said circuit board wherein said connector includes an insulative frame having opposite sides and includes first and second laterally

5 spaced columns of contacts mounted on the frame, the contacts in each column being spaced apart in a longitudinal direction, and the connector having a centerline that lies between said columns, each contact in a column being laterally spaced from a contact in the other column, each contact being formed of a metal strip having opposite edges and having a centerline generally lying halfway between said edges, each contact having an upper portion with an elongated upper strip section for engaging another device and having a lower portion with an elongated deflectable strip section and with a termination end for engaging one of said circuit board traces, wherein:

10 the elongated upper strip sections of said contacts all extend in said lateral direction, but the elongated deflectable strip sections each extends at an acute angle of a plurality of degrees from said lateral direction, the elongated deflectable strip sections of contacts in said first column extending at acute angles from the lateral direction towards said centerline and towards a first one of said frame sides and the elongated deflectable strip sections of contacts in said second column extend at an acute angle towards said centerline and towards the second of said frame sides.

7. The combination described in claim 6 wherein:

said conductive traces on said circuit board extend along a longitudinally-extending line that lies under said centerline, with the pitch of said traces being half the pitch between contacts that all lie in one of said columns.

8. The combination described in claim 6 wherein:

in an initial position of said connector, said insulative frame is vertically spaced a first distance from said circuit board and said elongated deflectable strip sections extend at downward inclines toward said centerline but their

**5** termination ends to not extend fully to said centerline, and in a fully installed position said frame is closer to said circuit board and said elongated deflectable sections are all deflected to extend at smaller inclines than in said initial orientations and their termination ends lie closer to said centerline.

9. The connector described in claim 6 wherein:

said contacts are horizontally spaced along each of said columns;

said contact lower portions each have a vertically-extending termination

section connecting an end of an elongated deflectable strip section to a

**5** termination end.